

CONOCEPHALUS DORSALIS (LATREILLE) (ORTHOPTERA: TETTIGONIIDAE) IN MERSEYSIDE AND LANCASHIRE

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ABSTRACT

Conocephalus dorsalis (Short-winged Conehead) was discovered at two Sefton Coast, Merseyside sites in 2002 and 2005 and at Warton Marsh on Morecambe Bay, Lancashire in 2005. These are new records for VC59 (South Lancashire) and VC60 (West Lancashire). This paper reports the circumstances of the discoveries and results of survey work in 2005.

INTRODUCTION

Conocephalus dorsalis (Latreille), the Short-winged Conehead, is a small cryptically-coloured bush-cricket, normally found in wet places, such as coastal salt-marshes and inland bogs and reed-beds (Marshall & Haes, 1990). Its British distribution is primarily southern and eastern, the recent northern limit being Anglesey in the west and the Humber Estuary in the east, though the insect is certainly spreading in some southern areas, more than half its known sites having been discovered since 1970 (Haes & Harding, 1997). Marshall & Haes (1990) comment that there are no records from the many suitable-looking coastal habitats in north-west England.

This article describes the discovery of *C. dorsalis* on the Sefton Coast, Merseyside (VC59) and at Warton, near Carnforth, Lancashire (VC60) and subsequent survey work.

DISCOVERY

While conducting a vegetation survey at Marshside, Southport on 10 September 2002, P.S. Gateley photographed but did not identify *C. dorsalis* in Sea Club-rush (*Bolboschoenus maritimus*) at SD352205. Two years later, in the summer of 2004, S. Palmer and N. Hunt independently recorded the same species close to Gateley's locality, the latter drawing PHS's attention to its presence. PHS located and photographed two males and a female of *C. dorsalis* on 18 September 2004 near the sea-wall at Marshside.

This intertidal site, owned by Sefton Metropolitan Borough Council, has recently been leased by the RSPB as an extension to their Marshside Nature Reserve.

On 30 July 2005, C. Felton reported finding five large nymphs of *C. dorsalis* on salt-marsh at Birkdale Green Beach (SD315158), about 6 km south-west of the Marshside locality.

Using a Batbox 111 bat-detector from Stag Electronics set at 40 kHz, JMN noted the distinctive stridulation of *C. dorsalis* on 21 September 2005 in Sea Rush (*Juncus maritimus*) at SD473736 on Warton Saltmarsh, Morecambe Bay, Lancashire.

2005 SURVEYS

Methods

Searches for *C. dorsalis* were carried out at Marshside and Birkdale Green Beach on five occasions each between 5 August and 3 October 2005 and on Warton Saltmarsh for *C. dorsalis* on 21–22 September 2005.

Coneheads were located by walking very slowly (less than 0.5 km/h) through upper salt-marsh vegetation looking for any movement. Two males were found at Marshside on 19 September with the help of JMN's bat-detector and this technique was also used at Warton. Where possible, the insects were sexed and, in Merseyside, 10-figure grid references were determined using a Global Positioning System so that locations could be entered into the Sefton Coast Geographical Information System.

Results and Discussion

On the Sefton Coast, 102 adult and two final-instar nymphs of *C. dorsalis* were found, 64 at Marshside and 40 on Birkdale Green Beach (Table 1); by early October, numbers were much reduced. Apart from a single female of the long-winged form *burri* Ebner at Marshside, all were of the typical brachypterous type. Most sightings here were close to Gateley's original locality but some were found up to 500 m southwest and 500 m northeast of this site (SD349201–358210). Finds on the Green Beach, were made over a linear distance of 1.75 km, from SD319162 to SD309149. Males were occasionally seen stridulating at Marshside but this could not be heard without the aid of a bat-detector. Acoustic monitoring on 19 September at Marshside suggested that more male *C. dorsalis* were present than could be observed visually and showed that stridulation continued late into the afternoon, even in cloudy, cool and breezy conditions.

At Warton Marsh, one stridulating male was detected on 21 September and three the following day, while a single female was observed and photographed on 22 September.

The Sefton Coast finds were almost all made in dense Sea Club-rush up to 1 m tall. At Marshside, these stands have been mapped as the National Vegetation Classification's S21b (*Bulboschoenus* (*Scirpus*) *maritimus* swamp, *Atriplex prostrata* sub-community), while at Birkdale the plant community is S21c (*Bulboschoenus* (*Scirpus*) *maritimus* swamp, *Agrostis stolonifera* sub-community) (Gateley & Michell, 2002). At Warton, the vegetation consists of scattered, dense patches of Sea Rush in short, heavily-grazed grassland and probably equates to SM18 (*Juncus maritimus*

Table 1. Visual and bat-detector records of *Conocephalus dorsalis* at Marshside, Birkdale and Warton in 2005.

	Marshside (5 visits)	Birkdale Green Beach (5 visits)	Warton Marsh (2 visits)
Males	28	15	
Females	30	18	1
Unsexed	2	7	
Nymphs	2		
Males found by bat-detector	2		4
Total	64	40	5

salt-marsh). Such salt-marsh vegetation is occasionally inundated by tidal water. Thus, spring tides reaching 10.4m ordnance datum in September 2005 caused extensive flooding at the Green Beach and Marshside. Evidently, the conehead populations are able to survive these exceptionally high tides.

It is interesting to speculate on the origin of these *C. dorsalis* populations. While the upper salt-marsh at Warton was formed between about 1862 and 1888 (Grey & Scott, 1987), the Sefton Coast habitat is no more than 10–15 years old (personal observations) so the insect must have arrived here recently. The distance from Anglesey to the Sefton Coast sites is about 75 km, while Warton Marsh is a further 55 km to the north of Marshside. These are long distances for a generally flightless orthopteran. However, Warne & Hartley (1975) consider the possible dispersion in sea-borne flotsam of *C. dorsalis* eggs, which can survive several months in sea-water. Influxes by flight of the long-winged form *burri* cannot be ruled out, especially in warmer summers when such forms are more frequent (Marshall & Haes, 1990).

In view of the ease with which this species is overlooked, it seems likely that careful searches, especially with a bat-detector, will discover *C. dorsalis* on other north-western salt-marshes, such as those on the Dee and other parts of the Ribble and Morecambe Bay.

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SHORT COMMUNICATION

***Volucella inanis* (L.) (Diptera: Syrphidae) in Perry Woods, Kent.** – A specimen of this large hoverfly was observed visiting flowers of *Eucryphia* in our garden, in Selling, east Kent on 31.viii.2006. This is the first time the species has been recorded in the garden. The main reason for observing it was the appearance of several noisy hornets which along with numerous *Bombus* spp. were attracted to the tree's large white flowers. Morris and Ball (*BJENH* 16: 221–227) report on the recent expansion in range of this hoverfly in England (up to 1999, thereafter the species shows a possible decline) and speculate on whether its success is due in any way to the changing fortunes of the hornet. The sudden appearance of both species may be significant. – J. S. BADMIN, Coppice Place, Selling, Kent ME13 9RP.